

## Claims:

Having thus described the invention, what is claimed is:

1. A system for analyzing a solution including a plurality of components and for designing security into that solution, the system comprising:
  - 5 a first system which identifies the security threats for the solution;
  - a second system which identifies the security properties of the overall solution based on a set of security functions attributable to defined security subsystems;
  - a third system which is coupled to the second system and which allocates security properties to the components of the solution based upon the selected functions which are derived from the nature and number of the security subsystems within the solution;
  - 10 a fourth system which is coupled to the third system for allocating the security properties to the components of the solution and which identifies functional requirements for the components, in terms of the Common Criteria, in order to comply with the security properties of the component allocated by the third system; and
  - 15 a system which is coupled to the fourth system and which documents the requirements for the security components for the system.

2. A system for designing security into a solution including the elements of Claim 1 wherein the second system which identifies security properties of the overall solution includes a component which uses standard security subsystems for identifying security properties.

3. A system for designing security into a solution including the elements of Claim 2 wherein the standard criteria for identifying security properties includes a system which maps functions of standard security subsystems to an ISO standard 15408, also known as Common  
5 Criteria.

4. A system for designing security into a solution including the elements of Claim 1 wherein the system further includes a system which documents the solution and the security assumptions using a solution design security methodology.

10 5. A system for designing security into a solution including the elements of Claim 4 wherein the system further includes a system which provide integrity requirements using a standard set of criteria.

6. A system for designing security into a solution including the elements of Claim 5 wherein the standard set of criteria are in accordance with ISO 15408.

7. A method of designing security for a solution in a system which includes insecure components, the steps of the method comprising:

identifying the security threats to the solution;

determining the security properties of the overall solution;

5 assigning selected security properties for the overall solution to components of the solution;

enumerating security requirements for infrastructure, components and operations;

developing integrity requirements; and

10 creating at least one functional technology diagram to document security requirements for the solution.

8. A method of designing a secure solution including the steps of Claim 7 wherein the method further includes the step of ranking the security threats to the solution and considering the biggest threats to the security.

15 9. A method of designing a secure solution including the steps of Claim 8 wherein the step of ranking the security threats to the solution includes the step of doing less for security threats not considered substantial threats to the solution.

10. A method of designing a secure solution including the steps of Claim 7 wherein the method further includes the step of documenting the solution environment and security

assumptions and using the environment and security assumptions in developing the security properties of the overall solution.

11. A method of designing a secure solution including the steps of Claim 7 wherein the method further includes the step of developing an integrity requirements for the solution and  
5 using those integrity requirements in the functional technology diagram(s) for the solution.

12. A method of securing a solution including the steps of Claim 7 wherein the step of determining the security properties of the overall solution includes the step of using standard criteria for evaluating the solution.

13. A method of securing a solution including the steps of Claim 12 wherein the step of determining the security properties of the overall solution includes the step of using the Common Criteria of ISO Standard 15408.

14. A method of securing a solution including the steps of Claim 7 wherein the step of  
15 enumerating security requirements for infrastructure, components and operations includes the step of using an industry standard security criteria.

15. A method of securing a solution including the steps of Claim 14 wherein the step of using an industry standard security criteria includes the step of using Common Criteria which conforms to ISO Standard 15408.

16. A method of securing a solution including the steps of Claim 7 wherein the step of enumerating security requirements for infrastructure, components and operations includes the step of identifying, enumerating and describing a number of standard security subsystems that in total represent the security function of the solution.